

CSX NA Dispatcher



Territory for Train Dispatcher 3 Computer Simulation

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Important Notice

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CSX “NA” Dispatcher - Boston Desk

This territory simulates the lines controlled by the CSX NA Dispatcher, including the B&A mainline from Boston to Springfield, Massachusetts and the connecting branch lines. The computer display duplicates, with some minor modifications, the screen layout used at the actual dispatching desk. Mainline, local and yard train movements are recreated, based on actual schedules, along with track permits that reflect the work performed during a typical day. Additional procedures followed by the dispatcher are outlined in these notes, along with the necessary written forms that are used to control train and track car movements. Using these materials, a very accurate simulation of this territory is possible.

Display Settings

The screen display duplicates the overview screens that have been used on this territory since Conrail introduced them in the late 1980's. The view type should be set at “Classic” with no block information displayed. There are no platforms, defect detectors or work areas shown on the actual screens, so they are not included either. There are several minor differences between the simulation and the real thing. The display depicting the Middleboro, New Bedford and Fall River subdivisions has been slightly condensed to fit on the mainline screen in the simulation. This allows the entire territory to be viewed with only left-right scrolling. On the real system, dispatchers select controlled points using three character designations, but the simulator allows the assignment of only one key. As a result, controlled points are selected by using letter keys in the simulation. Apart from these differences, and the use of the mouse instead of a touch screen, what is shown on the simulator screen is basically the same as what the real dispatcher works with.

Time Settings

Due to the amount of work performed by freights and the high frequency of commuter trains at rush hour on this territory, it is difficult to run the simulation at a speed faster than real time. There are some breaks between the arrival of trains; dispatchers on the real railroad use this time to catch up paperwork, check inbound lineups, discuss upcoming movements with yards or connecting divisions, and eat lunch or run to the bathroom. If there is large block of time with no action, the clock speed can be increased for a while, then set back to real time when the next train arrives.

Alert and Function Settings

All of the available alert messages contain information that is conveyed to dispatchers on the real railroad in some form or another. While the real computer system only beeps when there is a serious signal failure, and does not display alert messages on the screen, most of this information is communicated to the dispatcher by radio. The program allows sound files to be assigned to alert messages, so wave files of radio calls recorded from a scanner could be added as desired. All of the functions (Outlaws, Permission, etc.) can be left active as well, although several are not used in this territory.

Random Settings

Mechanical failures on trains outside of yards are fortunately not very common. Inspections in terminals allow most defects to be discovered before a train departs. As a result, a defect detector setting of 10 out of 1000 with an 85% false alarm rate is fairly realistic. The same goes for switches - 10 out of 1000

failures is reasonable, with a 15 minute maintainer call time in this territory (On 1st and 2nd trick there are maintainers on duty at key locations to protect the passenger trains - on 3rd trick the call times can be increased). Of course, during the winter, switch failures increase dramatically as the snow piles up and call times are longer. Signal failures are also uncommon - 5 failures out of 1000 is realistic. For random train parameters, run time deviation of 5% is realistic with a late arrival percentage of 0% for passenger and 80% for freight (this will be explained further in the notes on schedules). Locomotive and train problems set at 5% will provide a realistic number of mechanical failures. Train derailments due to dropped signals should be set at 0% - operating rules require that the dispatcher notify approaching trains before changing a signal and engineers must bring their train to a safe stop if a signal changes unexpectedly.

Territory Notes - Boston Subdivision

Mileposts designated “QB” and measured west from Boston.

QB 1.1 - Cove

The Boston Subdivision begins at the limits of Cove Interlocking on Amtrak’s Northeast Corridor. The interlocking is controlled by the Amtrak Terminal Dispatcher, and is not shown on the NA Dispatcher’s screen. Since most train movements here are regularly scheduled, the Amtrak dispatcher will just line them up, and trains arriving in the simulation will not ask for permission. Departing trains may be sent on either track (R1 or R2), although the specified exit location is preferred.

QB 1.2 - Platform “Back Bay”

Station stop for all Amtrak and MBTA trains. There is an island platform, so trains can work on either track.

QB 2.5 - Platform “Yawkey”

Station stop for some MBTA trains. Platform is on track 2 only.

QB 3.0 - Area “Farm”

Located just east of CP-3.

QB 3.1 - CP-3 (R)

East end of Beacon Park Yard (RY) and preferred route for lite engines going to the house. CP-4 can be used as an alternate for trains scheduled to enter the yard here.

QB 4.8 - CP-4 (Q)

West end of Beacon Park Yard, controlled by the Beacon Park Yardmaster. Lead 1 (Q1), Lead 2 (Q2) and Lead 3 (Q3) may be used interchangeably if needed, but trains should be routed as requested by the yardmaster. Lead 1 is often blocked with stored cars.

QB 4.9 - Area “Allston”

Located just west of CP-4.

QB 8.1 - Platform “Newtonville”

MBTA station stop on track 2 only.

QB 9.1 - Platform “West Newton”
MBTA station stop on track 2 only.

QB 10.2 - Platform “Auburndale”
MBTA station stop on track 2 only.

QB 11.4 - CP-11 (P)
Universal crossovers.

QB 13.5 - Platform “Wellesley Hills”
This platform represents both the Wellesley Farms and Wellesley Hills station stops, since both are located in the same block. The schedules in the simulation use the Wellesley Hills times for westbounds and the Wellesley Farms times for eastbounds. The westbound platform is on track 1 and the eastbound platform is on track 2, although either can be used in an emergency.

QB 14.7 - Platform “Wellesley Square”
MBTA station stop. The westbound platform is on track 1 and the eastbound platform is on track 2, although either can be used in an emergency.

QB 17.7 - Platform and Area “Natick”
MBTA station stop. The westbound platform is on track 1 and the eastbound platform is on track 2, although either can be used in an emergency. Area “Natick” is on track 1 only at the connection to the Saxonville Industrial.

QB 19.9 - Platform “West Natick”
MBTA station stop. The westbound platform is on track 1 and the eastbound platform is on track 2, although either can be used in an emergency.

QB 21.3 - CP-21 (O)
Location of connections to the Framingham Subdivision and Framingham North Yard via the Station Track (OS). There are two features at this interlocking that are not included in the simulation. A high car detector that scans eastbound trains is not included, since only stacks or multilevels would activate it and alarms are extremely uncommon. In addition, the real dispatcher must activate the Concord Street crossing protection for eastbound trains that do not stop at Framingham Station, but that function is currently not available in TD3.

QB 21.4 - Platform “Framingham” and Areas “Framingham-1” and “Framingham-2”
Amtrak and MBTA station stop with westbound platform on track 1 and eastbound platform on track 2, although either can be used if needed. Current special instructions require that when a passenger train is working in the station, other movements must be held clear of the adjacent track. As a result, commuter trains that are holding at Framingham until their next run must clear the station to allow other trains to work, and freight trains may not pass through the station while a passenger train occupies the other track. An overhead walkway currently under construction will eliminate this requirement in the near future. Commuter trains terminating at Framingham will change to their new outbound number when they occupy track 2 in the station (see passenger train notes).

QB 21.7 - CP-22 (N)
Location of connections to Framingham North Yard via the Long Wye (NL), Nevens Yard (NN), CP Yard via the West Wye (NW) and the Fourth Iron track to CP-23. All of these tracks are under the jurisdiction of the yardmaster at Framingham. Trains will request permission to enter from the West

Wye, since they would block Waverly Street crossing if held at CP-22. The Fourth Iron is a non-signalled track, but is shown as a through track in the simulation since road trains pull through it to drop cars, and it is regularly used to store commuter train equipment.

QB 22.0 - Area "Nevens"

Located between CP-22 and CP-23 adjacent to Nevens Yard. Road trains leave cars for Framingham Yard here, either on the Fourth Iron or one of the main tracks.

QB 22.9 - CP-23 (M)

Location of connections to Nevens Yard via the Third Iron (M3) and the Fourth Iron track.

QB 23.5 - Area "Ashland"

Road freights dropping cars at Framingham leave the rear end of their trains in this area, and trains originating at Nevens pull up here for their roll-by inspections.

QB 24.6 - CP-24 (L)

Universal crossovers.

QB 25.3 - Ashland Dragging Equipment Detector

QB 28.2 - CP-28 (K)

Universal crossovers.

QB 29.4 Area "Westboro"

Location of Westboro Auto Site on track 1 only.

QB 33.3 - CP-33 (J)

Universal crossovers.

QB 33.6 Area "Dana"

Dana Films siding, switched eastbound on track 2 only.

QB 36.4 Platform "Grafton"

MBTA station stop. The westbound platform is on track 1 and the eastbound platform is on track 2, although either can be used in an emergency.

QB 37.4 Area "North Grafton" and Grafton Hotbox and Dragging Equipment Detector

Connection to Grafton & Upton Railroad, switched eastbound on track 2 only.

QB 39.0 - CP-39 (I)

Crossover - 1 to 2 east or 2 to 1 west only.

QB 40.5 Area "Sacks"

Sacks siding, switched eastbound on track 2 only.

QB 43.0 - Area "East Worcester"

Located just east of CP-43.

QB 43.3 - CP-43 (H)

Connection to east end of Worcester Yard (HY), controlled by the Worcester Yardmaster. The lead to the

yard is designated Area “East Lead”

QB 43.5 - Area “Worcester Yard”

Located between CP-43 and CP-44 adjacent to Worcester Yard.

QB 43.7 - CP-44 (G)

Connection to Controlled Siding and Stub Track (GS). The hand switch to the MBTA layup yard is located on the Controlled Siding just west of CP-44, and trains need headroom at CP-44 to access it (that is the purpose of the stub track). In the simulation, trains to and from the layup yard arrive and depart via the Stub Track (GS).

QB 44.0 - Area “Worcester” and Platform “Worcester”

Located between CP-44 and CP-45. The platform for Worcester Station is located on the Controlled Siding only, but there is a small paved area adjacent to track 1 for use in absolute emergencies. Commuter trains that turn at Worcester (including deadhead moves to the layup yard) change to the new train number when they occupy the Controlled Siding at Worcester Platform. Freight trains are prohibited from operating on the Controlled Siding.

QB 44.3 - CP-45 (F)

Connections to the west lead to Worcester Yard (FY) (also designated Area “West Lead”), Storage Track (FS), and the Providence & Worcester Railroad (FW) and (FE). The Storage Track is used for storing intermodal cars for the van site, and can be used to hold commuter train equipment out of the station if needed. The westbound connection to the P&W (FW) leads to the Hill tracks where all freight and intermodal traffic is interchanged. The eastbound connection (FE) is used by trains enroute to the Boston & Maine Railroad (Guilford). Trains arriving on this track will ask for permission, since they would block several crossings if held at CP-45. The B&M line to Ayer is single track, so before lining up a train with exit FE, the dispatcher should check the train schedule to see if any trains are due off the B&M. If there are any pending arrivals within two hours, then the departing train must be held (the simulation won't enforce this, but that's how it must be done in real life).

QB 45.0 - Area “Worcester West”

Located just west of CP-45.

QB 48.0 - Area “Jamesville”

Located east of CP-48.

QB 48.3 - CP-48 (E)

End of double track.

QB 50.7 - Area “Webster Jct”

Location of industry siding.

QB 55.4 - Charlton Hotbox and Dragging Equipment Detector

QB 55.7 - CP-57 (D)

Controlled Siding to CP-64.

QB 64.0 - CP-64 (C)

End of Controlled Siding.

QB 74.9 - West Warren Hotbox and Dragging Equipment Detector

There is also a High Car Detector at this location that is not simulated due to extremely rare activation.

QB 79.4 - CP-79 (B)

Controlled Siding to CP-83

QB 82.0 - Area “Palmer”

Palmer Yard is located off the Controlled Siding and is under the authority of the West Springfield Yardmaster. The connection to the New England Central and Mass Central Railroads is located in the yard. As a rule, hand operated switches are not depicted in the simulation, since they are not controlled by the real dispatcher or displayed on the screen. However, since two passenger trains and a local freight clear the main at this location, the hand switch to Palmer Yard is included as a dispatcher controlled switch and signal (AY).

For trains that are going into the yard (P056 and B740), line the switch for the crew prior to displaying the signal at CP-83 and return it to normal after the train clears. For trains that originate at Palmer (P055, P057 and B740’s return trip), line the switch and display the “signal” out of the yard. These actions take the place of granting verbal authority for a train to open the switch and occupy the Controlled Siding. Note that the switch cannot be operated if another train is lined up to operate through the siding, just as is the case with the electric lock switch in real life, although a train may be given permission to follow another after it passes the switch.

Track 4 at Palmer is located off the main track and is often used to store multilevels. Any multilevel train with work at Palmer must work off the main track while freights work off the siding (do not line them into the yard).

QB 83.6 - CP-83 (A)

West end of Controlled Siding and New England Central Railroad crossing. In actual operations, the diamond is a semiautomatic interlocking. The NA Dispatcher requests signals for movement on the CSX side, but they do not “lock in” until the train is on the approach circuit to the distant signal. Once the approaching train has reached that point, the signal is displayed for movement on CSX and cannot be cancelled by a train on the NECR. Trains on the NECR stop at the diamond and the crew pushes a button located in a control panel at the interlocking. If there are no CSX trains on the approach circuit, any signal request by the NA Dispatcher is cancelled and the signal is displayed for the NECR. Although there are only a handful of through trains on the NECR, the diamond is located at the north end of the NECR yard and is often used for headroom by switching crews.

In the simulation, the diamond is set up in the same way, with trains on the NECR automatically generated and lined up by the computer. The only difference is that TD3 allows a signal request on CSX to remain in place even with a conflicting move lined across the diamond. The signal in the field will only be displayed for the first train that arrives, though, just like the operation of the real interlocking. In addition, the train frequency across the diamond is set higher than in real life, in order to duplicate the uncanny appearance of NECR trains every time a late CSX intermodal train is approaching Palmer.

QB 89.4 - Area “Ludlow”

Several industries, switched both directions.

QB 91.5 - Wilbraham Hotbox and Dragging Equipment Detector

QB 92.0 - CP-92

The Boston Subdivision becomes the Berkshire Subdivision at CP-92. The NB Dispatcher controls the interlocking, so it is not shown on the screen, but will check with the NA Dispatcher before lining up eastbounds here. As a result, trains will ask for permission to enter at this location (AM).

Fall River Subdivision

Mileposts designated “QNF” and measured south from “Swamp”.

QNF 0.0 - DCS Station “Swamp”

Station sign designating the limit of the block, located at the connection switch to the New Bedford Subdivision. The entire Fall River Subdivision is governed by DCS rules. In the simulation, the signal at Myricks on the New Bedford Sub is used to allow trains to enter the block, but in real life, southbound trains require a Form D to operate between Swamp and Wharf. See notes on DCS rules and the use of Form D’s.

QNF 11.0 - DCS Station “Wharf” (Entrance 22)

Station sign designating the limit of the block and connection to Fall River yard tracks. In the simulation, northbound trains will ask for permission to enter here, but in real life they also require a Form D to operate between Wharf and Swamp.

Fitchburg Subdivision

Mileposts designated “QBU” and measured south from Fitchburg.

QBU 4.3 - DCS Station “Fitch” (Entrance 31)

Station sign designating the limit of the block located at the end of the serviceable track. The entire Fitchburg Subdivision is governed by DCS rules. In the simulation, southbound trains will ask for permission to enter here, but in real life they also require a Form D to operate from Fitch to Clint, Boro or Pike. See notes on DCS Rules and the use of Form D’s.

QBU 5.0 - Area “Leominster”

Location of several industries.

QBU 13.2 - DCS Station “Clint” (3)

Station sign designating the limit of the block. In the simulation, a signal is used to allow trains to enter the block.

QBU 23.0 - Area “Northboro”

Several industries are located between Clint and Boro.

QBU 30.5 - DCS Station “Boro” (4)

Station sign designating the limit of the block. In the simulation, a signal is used to allow trains to enter the block.

QBU 33.0 - Area “Centre”

Several industries are located at Framingham Centre.

QBU 34.9 - DCS Station “Pike” (Entrance 41)

Station sign designating the limit of the block and connection to Framingham Yard. In the simulation, northbound trains will ask for permission to enter here, but also require a Form D from Pike to Boro, Clint or Fitch.

Framingham Subdivision

Mileposts designated “QBF” and measured north from Mansfield.

QBF 0.0 - Amtrak Mansfield

Connection to Amtrak Northeast Corridor.

QBF 0.1 - DCS Station “Mansfield” (Entrance WM)

Station sign designating the limit of the block. The entire Framingham Subdivision is governed by DCS rules. In the simulation, northbound trains will ask for permission to enter here, but in real life they also require a Form D to operate from Mansfield to Fox, Walpole, Field or CP-21. See notes on DCS Rules and the use of Form D’s.

QBF 0.3 - Area “Mansfield”

North end of Mansfield Yard.

QBF 4.9 - DCS Station “Fox”

Station sign designating the limit of the block. In the simulation, a signal is used to allow trains to enter the block.

Also the location of Platform “Foxboro”, on both sides of the station sign, used by MBTA football trains.

QBF 5.0 - Area “Foxboro”

Location of several industries.

QBF 8.0 - Walpole Yard Limits - South End (Entrance WS)

Operation between QBF 8 and QBF 10 is under Rule 93 yard limits where movements are made with verbal permission of the dispatcher at restricted speed. In the simulation, trains exit/enter at this location and will ask for permission here to enter the territory. A southbound train entering here requires a Form D from Walpole to Fox or Mansfield.

QBF 8.5 - DCS Station “Walpole” and Amtrak Walpole Interlocking (W)

This interlocking is controlled by the Amtrak Midland Dispatcher and is not displayed on the NA Dispatcher’s screen. Trains are routed to and from Walpole Yard, Franklin, and Readville at this location. On CSX, Walpole is in service as a DCS Station location.

QBF 10.0 - Walpole Yard Limits - North End (Entrance WN)

North end of Rule 93 yard limits. In the simulation, trains enter/exit at this location and will ask for permission to enter the territory. A northbound train entering here requires a Form D from Walpole to Field or CP-21.

QBF 12.4 - DCS Station “Field” (V)

Station sign designating the limit of the block. In the simulation, a signal is used to allow trains to enter the block.

QBF 13.7 - Area “Medfield Jct.”

Bay Colony Railroad crosses via two connection switches. Also the location of a dragging equipment detector.

QBF 21.2 - DCS Station “CP-21”

Connection to Boston Subdivision. A signal is displayed for southbound trains to enter the Framingham Subdivision here, but they must also have a Form D from CP-21 to Field, Walpole, Fox or Mansfield.

Middleboro Subdivision

Mileposts designated “QN” and measured south from Attleboro.

QN 0.0 - Amtrak Attleboro

Connection to Amtrak Northeast Corridor.

QN 0.4 - DCS Station “Croft” (Entrance 11)

Station sign designating the limit of the block. The entire Middleboro Subdivision is governed by DCS rules. In the simulation, southbound trains will ask for permission to enter here, but in real life also require a Form D to operate from Croft to Whit, Dean or Cot. See notes on DCS rules and the use of Form D’s.

QN 8.3 - Area “Whittenton”

Location of several industries.

QN 9.4 - DCS Station “Whit”

Station sign designating the limit of the block. In the simulation, a signal is used to allow trains to enter the block.

QN 10.1 - Area “Taunton”

Location of a siding.

QN 11.4 - DCS Station “Dean”

Station sign designating the limit of the block. In the simulation, a signal is used to allow trains to enter the block.

QN 11.6 - Area “Weir Jct.”

Connection to Bay Colony Railroad.

QN 13.3 - DCS Station “Cot”

Station sign designating the limit of the block. In the simulation, a signal is used to allow trains to enter the block. In addition, the connection switch to the New Bedford Subdivision is located here. In real life, it is a hand operated switch, but it is controlled by the dispatcher in the simulation. South of “Cot” is the connection to the Amtrak Capeway Branch (Entrance 12). Northbound trains will ask for permission to enter here, and require a Form D before they can pass the DCS sign at “Cot”.

New Bedford Subdivision

Mileposts designated “QN” and measured south from Attleboro.

QN 13.3 - DCS Station “Weir”

Station sign designating the limit of the block, located at the connection switch with the Middleboro Subdivision. The entire New Bedford Subdivision is governed by DCS rules. In the simulation, the signal at Cot on the Middleboro Sub is used to allow trains to enter the block, but in real life, southbound trains require a Form D to operate from Weir to Myricks or Dock. See notes on DCS Rules and the use of Form D’s.

QN 16.2 - Area “Myricks”

Location of several industries.

QN 16.9 - DCS Station “Myricks”

Station sign designating the limit of the block. In the simulation, a signal is used to allow trains to enter the block. In addition, the connection switch to the Fall River Subdivision is located here. In real life, it is a hand operated switch, but it is controlled by the dispatcher in the simulation.

QN 28.2 - DCS Station “Dock” (Entrance 21)

Station sign designating the limit of the block and connection to New Bedford yard tracks. In the simulation, northbound trains will ask for permission to enter here, but in real life also require a Form D to operate between Dock and Myricks or Weir.

Train Operation Notes - General

All of the trains in this simulation are based on real train movements. The times are based on actual freight and passenger schedules, regular crew times and train movement records. Some modifications have been made to work more smoothly in the simulation, but the end result duplicates the actual operation.

As was mentioned earlier, it is important to set the random late arrivals to 0% for passenger and 80% for freight trains. The reason for the high percentage of “late” freight trains is to simulate the high degree of variability in freight train operations. Not only are freight trains sometimes late, they are often early as well. The arrival times in the simulation are set earlier than the actual scheduled arrival times in order to generate both early and late trains. It will also cause trains to “bunch up”, or never arrive at all, just as they do on the real railroad.

The passenger trains on this territory generally run on time. The exception is train P448, which originates in Chicago and is often held for connections. To simulate this train’s late arrival without affecting the other passenger trains, 448 is scheduled to arrive at different times on each day of the week.

Train Operation Notes - Switching and Train Commands

In the “NG” and “NI” Dispatcher simulations, the few pickups and setoffs at yards were represented by trains stopping to work in an area, and did not require any action by the dispatcher. This fairly accurately duplicated the workload on the dispatcher in those territories. On the Boston & Albany, most trains make frequent stops to work off the main, and the dispatcher spends a great deal of time handling these moves. In addition, the decisions that the dispatcher makes regarding the timing and routing of trains performing work has a large impact on the operation. As a result, it was decided that trains performing work in the “NA” simulation would be handled by the dispatcher. While it is not completely realistic for the dispatcher to issue instructions that are usually given by the conductor (stop, reverse and couple up), having trains work this way makes the simulation more accurate.

Trains dropping cars will stop in a work area and split into two trains. The first train represents the cars to be set off (head end), and the second train is the through portion of the train to be left on the main (rear end). If the cars to drop are to be pulled into the yard, simply line the head end in. If the cars to drop must be backed into a track, line the head end of the train through the interlocking for headroom and issue a “Stop Now” instruction after it clears. Then issue a “Reverse Direction” and “Start Movement” instruction and display the signal toward the yard.

Since TD3 doesn’t know that the second “train” represents cars left on the main, the rear end will “roll” down to the interlocking. If it is desired to leave room between the cars and the interlocking, a “Stop Now” command may be issued before the “train” reaches the signal. Otherwise the cars will stop on their own when they arrive at the signal. Next, the direction of the cars must be changed, in order to allow the engines to couple up when they return (TD3 does not permit running trains toward each other in the same block). Issue a “Reverse Direction” instruction to turn the cars and “Stop Now” instruction to keep them from rolling away (The “Stop Now” command is not needed if it has already been used as noted above).

After working in the yard, the locomotives will come out to tie back on to the train. Give the engines headroom, if needed, using the “Stop Now”, “Reverse Direction” and “Start Movement” commands, so that they are stopped at the interlocking facing back toward the rear end of their train. To couple back up, issue a “Pass Next Red Signal” instruction to the engines. Once the engines have pulled up against the train and stopped, issue a “Merge” instruction to couple them on to the cars. To start the train moving again, issue a “Reverse Direction” instruction so that the train is facing forward again and a “Start Movement” instruction.

Trains that pick up cars work in exactly the same way. The train will stop and the engines will split off and go into the yard. The train will then come out of the yard with cars and double up to the rear end on the main.

The “Stop”, “Reverse” and “Start” commands are also used with passenger trains and lite engines whenever they need to reverse direction. Most trains in this territory require that the dispatcher issue the instructions - if a train reverses automatically at a work area, it will be indicated in the train’s notes. Passenger trains that turn as a new train do not need to be reversed, but will face the right direction after they change numbers. Yard headroom moves will also reverse on their own.

Trains that work at hand operated switches such as Westboro, Palmer and industry sidings are not handled by the dispatcher. They will stop to work in the designated area and depart when they are finished.

Train Operation Notes - Passenger

Passenger trains on CSX are numbered using the prefix “P”, followed by the Amtrak number (P448, P142, etc.) These trains have priority over freight trains.

P448 and P449 are the Chicago trains. P142 and P145 are inland route trains. All four trains operate over the entire line between Boston and Springfield, making stops at Back Bay, Framingham and Worcester. P055 and P056 are the Vermont trains, operating on this territory between Springfield and Palmer Yard (AY), where they connect with the New England Central Railroad.

The P500 series trains are MBTA commuter trains that are operated by Amtrak crews. Consult each

train's schedule for station stops and end points (Worcester or Framingham). Trains making stops at certain stations must be routed to specific tracks as is indicated in the territory notes. One note on schedules: the arrival times at the last stop are not shown, since passengers are discharged upon arrival and the train does not need to wait if it is early. The trains may then be immediately turned or yarded as is explained below.

Trains originating or terminating in the Worcester layup yard are designated as deadhead moves with a "D" following the train number. For example, P502D arrives from the yard on the Stub Track at CP-44 (GS) and turns into train P502 in Worcester Station. Arriving train P533 turns into deadhead P533D at Worcester Station and must be moved to the yard via the Stub at CP-44 (GS).

Trains from Boston that do not terminate at Worcester layup yard turn and become a new train at Worcester Station platform.. For example, P509 becomes train P518 at platform "Worcester" and returns to Boston. One note of caution: once a train changes to the new train number, it will be "stuck" at the station platform until its departure time, which can sometimes be more than twenty minutes. In actual operations, if there is another train due to use the platform during the layover time, the dispatcher will instruct the crew to pull west of CP-45 to clear the station.

To do this in the simulation, run the inbound train through the station on one of the main tracks *instead of the siding*. Doing this avoids the "Worcester" platform, and the train will not change to the new eastbound train number. Issue a "Stop Now" and "Reverse Direction" instruction after it clears west of CP-45. Once the other movement clears, line the train into the station platform on the siding and it will change into the new outbound train. Usually, there are no conflicting moves, and this procedure will not need to be done. The exception is P563 which arrives at 1917 and departs as P562 at 2015. Since P142 stops at Worcester at 2000 hours, the commuter equipment is scheduled to pull clear of the platform. The simulation takes this into account and changes the train at area "Worcester West" instead of platform "Worcester", allowing P563 to operate via the siding and still pull west of CP-45.

At Framingham, trains that turn must often clear the station platform to allow other trains to work. In actual operations, the dispatcher has the flexibility to instruct trains to pull west or east of the station, and to use any track to hold trains (the Fourth Iron is often used if it is clear).

The simulation is set up so that trains that terminate at Framingham turn and become the new train at area "Framingham 2" on track 2 only. This allows the dispatcher to bring a train into the station on track 1 to discharge passengers, then move it in either direction on any track for storage. The train must be manually instructed to stop and reverse direction once it reaches its holding point. When ready, the train may then be moved to area "Framingham 2" where it will change to the outbound train number and wait for its scheduled departure time. If a train is able to hold in the station while waiting to turn, simply bring it in on track 2, and it will immediately change to its new number.

One train comes out of Boston as a double draft and splits into two trains at Framingham. P501 splits into trains P500 and P504 at area "Nevens". After splitting, P500 can be moved into the station to wait for its departure, but P504 must be held until after P502 from Worcester makes its stop. The Fourth Iron is a good place to make this move.

P590 is the Readville Switcher. This crew transfers equipment from South Station (R1) to North Station via Beacon Park Yard (RY) and the Grand Junction Runner. The train later makes the return trip. Since the arrival time varies, it is designated as a freight train.

P939 is the MBTA football train from Boston to Foxboro Stadium. It arrives on CSX at Walpole (WS), runs to platform “Foxboro” and returns after the game. P940 comes up from Providence via Mansfield (WM), runs to platform “Foxboro” and returns after the game.

Train Operation Notes - Freight

Freight Train Symbols

All former Conrail train symbols have now been replaced by CSX designations. Q100 series trains are intermodal trains, Q200 series trains are automotive network trains and Q300 to Q600 series are freight trains. “V” trains are coal trains, “E” trains are coal hoppers (empty) and “G” trains are grain trains. Intermodal and automotive trains have priority over all other trains, except passenger.

Q113 - Originates at Beacon Park, pulls west of CP-45 and backs into Worcester Yard (FY). The train will not clear the main while picking up cars out of the yard (work at area “West Lead”). It then pulls west of CP-45 and doubles to cars left by the P&W on the main. See local train notes for P&W train WX-2.

Q114 - Stops at area “Worcester West” and cuts off cars for Worcester. Cars are pulled into the yard at CP-45 and the power comes back out the same way (FY). The rest of the train goes to Beacon Park.

Q115 - Originates at Beacon Park, goes into Worcester at CP-43 (HY) and doubles out at CP-45 (FY). The work at area “Worcester West” simulates the time it takes to double out of the yard.

Q116 - Stops at area “Worcester West” and pulls the head end into Worcester Yard at CP-45 (FY) with Worcesters and P&W’s. It then pulls out of the yard at CP-43 (HY) and shoves back into the P&W (FW) at CP-45. The power then doubles back to the train and goes to Beacon Park.

Q117 - Originates at Beacon Park, goes in Worcester at CP-43 (HY) and doubles out at CP-45 (FY). The work at area “Worcester West” simulates the time it takes to double out of the yard.

Q119 - Originates lite out of Beacon Park, and pulls west of CP-45. Automatically reverses into Worcester Yard at CP-45 (FY) and doubles out with train. The work at area “Worcester West” simulates the time it takes to double out of the yard.

Q166 - Stops at area “Worcester West” and sets cars into the P&W (FW) at CP-45. Power doubles back and takes the rest of the train to Beacon Park.

Q167 - Originates at Beacon Park, goes in Worcester at CP-43 (HY) and doubles out at CP-45 (FY). The work at area “Worcester West” simulates the time it takes to double out of the yard.

Q168 - Entire train pulls into Worcester Yard at CP-45 (FY). Lite engines come out at CP-43 (HY) for Beacon Park.

Q170 - Same as Q168.

Q174 - Same as Q168.

Q264 - Drops multilevels at "Westboro" Yard. Drops remaining cars on Fourth Iron or main at "Nevens" for Y120 and runs lite to Beacon Park. See local train notes for Y120. On occasion, this train will also drop or pick up cars on track 4 off the main at Palmer. Since this is not a regular move, it was not included in the schedule, but can be simulated by holding the train at CP-79 for about 20 minutes, if desired.

Q283 - Originates lite out of Beacon Park, goes down the West Wye (NW) at CP-22 to pick up multilevels in the CP Yard, then stops at "Westboro" to pick up more cars.

Q294 - Multilevel train to Ayer via the P&W (FE) at CP-45 and return to Springfield.

Q420 - Stops at area "Ashland" and cuts off Framingham cars. Pulls up to area "Nevens" and leaves Framingham cars on the Fourth Iron or main. Lite engines run back to Ashland and pick up rear end of train for Beacon Park. See local train notes for pickup of Framingham cars (FRAM).

Q421 - Originates at Beacon Park. Stops at area "Worcester East" (CP-43) and cuts away engines to pick up cars from P&W (FW) at CP-45. Doubles up and goes west.

Q423 - Lite power from the Long (NL) to Nevens (NN). Doubles train out of Nevens Yard on the Third Iron at CP-23 (M3).

Q426 - Works at "Palmer" on the Controlled Siding, then goes to the B&M via the P&W (FE) at CP-45. This train often waits on the B&M single track for a crew, so if Q294 is running then Q426 should be held to allow Q294 to return from Ayer first..

Q427 - Through freight off B&M via P&W (FE) at CP-45.

Q436 - Stops at area "Worcester West" and sets off cars to P&W (FW) at CP-45. Ties back on and pulls train down to area "Worcester" and sets cars into Worcester at CP-43 (HY). Takes the rest of the train into Nevens Yard via the Third Iron at CP-23 (M3), and power goes to North Framingham via the Long Wye at CP-22 (NL).

Train Operation Notes - Yard and Industry Switchers

Beacon Park

Y101 (0630 M-F) - 1st trick yard switcher comes out of Lead 2 (Q2) to switch garbage cars stored on Lead 1 (Q1). It pulls west of CP-4 and automatically reverses to pick up cars off Lead 1, then pulls west and shoves back into Lead 2.

Y320 (2230 M-F) - Y320 is the third trick switcher. During the night, it will come out of the yard (RY) to switch the Boston Herald on Amtrak (R2) and return.

Framingham

FRAM is the designation given to the cars for Framingham that are left on the main by Q420. In real life, any one of the Framingham Yard jobs will come out and pick them up for the North Yard via the Long Wye (NL). Often, the cars will be left on the main for several hours until there is a clear track in the yard. In the simulation, there is no specific yard crew designated to get the cars and the engine is already tied on to them. The FRAM cars can be left on the main for several hours or pulled right into the yard, depending on what level of difficulty is desired.

B722 (1201 M-F) - The Westboro auto site switcher departs from the Third Iron (M3), works at area “Westboro” and automatically returns. In actual operations, this job will clear up in the yard if there is room, or will hold the main for varying amounts of time if the yard is full. In the simulation, the train is scheduled to work for one hour, but may be held as long as is desired in order to recreate a higher amount of congestion. For a challenge, keep the train on the main at Westboro for the duration of rush hour, as sometimes occurs in real life.

B723 (0800 Th-Mo) - This local freight departs from the Third Iron (M3) on Monday, Thursday and Friday, and runs to Worcester Yard (HY). After picking up any cars from Worcester (at area “East Lead”), the train automatically turns and works industries (Sacks, N.Grafton, Dana) on track 2 on the way back to Framingham (M3). While working at Dana, the train should be given the signal at CP-33 for headroom, due to the close proximity of the switch. After arriving at Framingham, the crew comes out of the North Yard on the Station Track (OS) and takes cars to Natick and return. On weekends, the crew switches the CP Yard, but the Y120 symbol is used in the simulation (see Y120 notes).

B724 (0700 M-F) - Switches industries on the Fitchburg Sub from Pike (41) to Leominster and automatically turns back to Framingham.

B725 (2130 Su-Th) - Takes cars from Framingham (NN) to Mansfield (WM) and Attleboro via the Framingham Subdivision. The train will exit at Walpole (WN) while it runs through Amtrak’s interlocking and reenter at the south end (WS). Later, it returns to Framingham with cars picked up at Attleboro.

Y120 (1201 M-F) - Y120 is the CP Yard auto site job. In real life, Q264 leaves the cars for this job on the main or Fourth Iron at CP-22, and the crew comes out of Framingham Yard lite and picks them up for the West Wye (NW). Sometimes the Y120 takes the cars right away, other times they are left on the main for hours. In the simulation, the engine is already on the cars when Q264 drops them. For a challenge, leave the train on the main for several hours and try to work around it, or line it right down the West Wye (NW) and get it out of the way. Eventually, the crew will return lite for the yard. On weekends, the work is done by B723, but the Y120 symbol is used all seven days in the simulation.

Y201 takes headroom several times off the Long Wye (NL) toward Nevens (NN) and automatically backs in the clear. When the train reverses, a “switch not lined” error message is generated since the train is in the interlocking. This may simply be OK’d.

Worcester

WX-2 is the P&W Railroad switcher that delivers intermodal cars for trains Q113 and Q119. The train shoves the cars for Q113 out on one of the main tracks between CP-45 and CP-44 (area “Worcester”), automatically pulls back into the P&W (FW), then shoves the cars for Q119 into Worcester Yard (FY). It then returns lite to the P&W. The cars for Q113 remain on the main until they are picked up later in the night.

Y120 (0700 M-F) - Switcher that takes headroom several times at CP-43 (HY) and automatically backs in the clear. This job sets up the van site, so it should be allowed to work as often as possible. When the train reverses, a “switch not lined” error message is generated since the train is in the interlocking. This may simply be OK’d.

Y220 (0700 Sa,Su 1500 M-W) - Yard switcher makes the same moves as Y120 on Saturday and Sunday. On Tuesday and Wednesday, it performs the local work between Worcester (HY) and CP-33 (Sacks,

N.Grafton, Dana) and returns. The train does not reverse automatically after working at Dana, so that it may be pulled east of CP-33 and run west on the other track if desired.

Y337 (2300 M-F) - This yard switcher makes a few moves at CP-43 (HY), just as Y120 and Y220 do, and then comes out at CP-45 (FY) with cars for area “Webster Jct” west of CP-48. It then automatically returns to Worcester.

Walpole / Readville

B732 (1300 M-F) - Local switcher from Readville on Amtrak’s Franklin Branch. Arrives at Walpole (WS) and runs south to area “Foxboro” to switch customers and automatically returns to Walpole.

B735 (0630 M-F) - Local switcher runs from Walpole (WS) to Mansfield (WM) and switches industries at Mansfield on the Northeast Corridor. Returns to Walpole later in the day.

B731 (1700 Su-Th) - Transfer run from Readville to Framingham. Arrives off Amtrak at Walpole (WN) and runs to Nevens Yard at CP-22 (NN). It then doubles up a train to take back to Readville.

Bay Colony Railroad - Crosses the Framingham Sub at Medfield Jct. and returns. In the simulation, this move is requested as a block permit. A Form D to operate in both directions between CP-21 and Field must be issued.

Middleboro

B726 (1930 Su-Th) - Arrives off the Capeway Branch (12), runs to Attleboro (11) and returns, switching customers enroute.

B727 (0630 M-F) - Local freight switches customers on Amtrak, arrives off the Capeway Branch (12), works in area “Weir Jct”, then automatically turns south. On Monday, Wednesday and Friday, it runs to New Bedford (21) and returns; on Tuesday and Thursday, it runs to Fall River (22) and returns. On the return trip, it automatically turns at Weir Jct and heads south for the Capeway Branch (12).

Train Operation Notes - Program Issues and Error Messages

There are several areas where the way in which the TD3 program handles train movements will cause error messages. Any time a train reverses direction with its rear end still in an entrance block, a “switch not lined” error message is generated. This will occur with trains that take headroom at an interlocking and shove back to clear and with trains that reverse direction after working on the secondary tracks. Simply click on “OK” to acknowledge the message - it will not affect the operation of the trains.

Another area which may cause problems is when a train that is working splits into to a new section (such as Q420 and Q264 at Framingham) and cannot be moved. The train status will show that the train is stopped waiting at a signal, but the “waiting since” time will be later than the current simulation time. As a result, the train will remain stopped until the time indicated on the status line is reached, even if a signal is displayed. This is believed to be caused by the program assigning a random late train delay to the newly created train, but the problem may be overcome by issuing a “Stop Now” command to the affected train, and then a “Start Movement” command. The train will then proceed when the signal is displayed.

Passenger train performance is affected by the way the program handles platforms and work areas. Since TD3 doesn’t know the exact location of the platform or work area in the block, trains will run the length

of the block before stopping to work. This results in minor variations in on time performance, but the simulation has been “fine tuned” to accurately recreate the overall running times and time consumed working.

Maintenance of Way Notes (Track Permits)

The performance of most types of maintenance work requires the permission of the train dispatcher. Track patrols conducted by inspectors in hi-rail vehicles are done on a daily basis, with various lines checked on certain days of the week. C&S maintainers, B&B gangs and welders all perform routine periodic maintenance tasks, most of which require authority to foul the tracks. In addition, production gangs move around the system engaged in major rail, tie and surfacing projects. As these activities vary from week to week, there is no way to exactly duplicate them, so the simulation reproduces the typical workload experienced by the dispatcher.

Track patrols are requested by the hi-rail driver (TC Driver) and require written authority on a Form D. Giving the inspector less time than is requested is not practical, as it takes time to set the track car on the rail and make the required observations, so it is better to delay giving authority until traffic permits.

C&S Maintainers conduct signal tests and maintain interlocking appliances. Most of this work will be requested as foul time, and can be interrupted to allow trains to pass if needed.

B&B crews perform work on bridges and structures and usually only need foul time when working close to the tracks. If traffic does not permit granting them time, they can usually work on some other task until the dispatcher can handle them.

Welders and local MOW gangs make minor repairs to the track in their territory. If major work is done, written authority on a Form D will be requested by the foreman. Smaller jobs not disturbing the track structure will be requested as foul time, requiring verbal permission. Usually, all of the requested time is needed at once in order to complete the job.

Production gangs consist of many pieces of on-track machines often operated by more than forty men. Once a gang starts working, rail, ties and ballast are removed and not restored to service until the end of the day. A gang foreman will request written authority on a Form D to perform work. Due to the high cost of this type of operation, production gangs should not be delayed and are usually given the full amount of time requested.

All of these types of maintenance, whether conducted with verbal or written authority, require the dispatcher to place computer blocking to prevent trains from operating into the work area. The only difference between the simulator and the actual system is that the real dispatcher must manually designate the work locations - they are not displayed automatically. In addition, the dispatcher must provide written authority on Form D's where needed, the use of which is explained in the next section.

Optional Activities

Train Dispatcher 3 reproduces the functions of the train dispatcher's console with exceptional realism, and provides a highly accurate simulation of train movements. The computer, however, is only one of the many tools used by the dispatcher in performing his or her duties. This section outlines the optional use of several written forms that are an integral part of dispatching trains. By following these procedures, the complete experience of sitting in the dispatcher's chair may be recreated.

Rulebooks and Timetables

The operation of trains in this territory is governed by the NORAC Operating Rules and current Employee Timetable. It would be impractical to reproduce the rules here (the book is 150 pages), but outdated copies are usually available at train shows and online auctions. Having a copy of these rules is not necessary, but the use of them will help clarify the operating procedures used in the simulation. Additional rules covered in the rulebook but not addressed by the computer may also be used. Specific instructions regarding the territory are contained in the Employee Timetable, old versions of which are also available at swap meets and auctions. Since block properties and speeds are not available to the real dispatcher on the computer, the timetable is the source of this information.

Train Sheets

Dispatchers are required by federal regulation to maintain a written record of train movements. Train sheets used for this purpose must indicate the date, weather, dispatcher's names, train symbols, engine numbers, car counts, crew names and on-duty times, and times that trains pass stations. While computer records are used on some railroads, dispatchers on this territory still use the traditional train sheets. Since the simulation does not include crew and engine information, it does not lend itself to this procedure, though. It is also difficult to reproduce a train sheet, as they are more than six feet long and two feet deep, with printed rows listing stations and columns for recording each train movement. It is not practical to provide a sample train sheet here, but one could be reproduced using the station information from the timetable. Generally, train times are not recorded at every station, but only where trains enter and leave the territory, and at junctions where they change tracks or are delayed.

Form D

The Form D is used to provide written authority for train and track car movements when required. It is the modern day NORAC rules equivalent of a train order. A Form D is reproduced here which may be copied and used as outlined in these notes. All Form D's are numbered consecutively, starting at midnight each day, and all contain the current date and dispatcher's name. In real life, the dispatcher reads the information to the train crew or track foreman as it is being written. The employee receiving it then reads it back to the dispatcher, who underlines each word as it is repeated. Obviously, this cannot be done in the simulation, but by waiting to write the Form D until authority is requested and then reading it back to yourself, the procedure may be duplicated. Once this is completed, the time effective is given. There are a number of sections on the form that are not discussed here - these are covered in the NORAC book and may be used in conjunction with those rules as desired. The basic procedures for train and track car movement are outlined below.

Train Movement - DCS Territory (Form D Control System)

The Fitchburg, Framingham, Middleboro, New Bedford and Fall River Subdivisions are non-signalled DCS territory. In actual operations, the dispatcher manually applies computer blocking to the track segment and then issues a Form D to the train, giving it authority to occupy the track. In the simulation, "signals" are displayed instead of blocking devices. The "To" line of the form is addressed to the crew of the train and specifies their location (To *C&E Extra 8048 at Walpole*). Line 2 is used to specify direction of movement, track number and limits of authority (Operate in *South Direction Single Trk Between Walpole and Mansfield*). Only one train is allowed in these limits at once, but once a train clears a block, another train may occupy it. Additional authority may be granted to a train on the same Form D, adding to Line 2. When a train clears the specified limits, the Form D is fulfilled and marked with an "X". Trains are also allowed to occupy DCS territory with verbal permission to pull one trainlength past an interlocking in order to reverse direction.

Track Cars (TC Driver)

Track Cars require a Form D to occupy any track, in signalled or non-signalled territory. Before issuing the form, the dispatcher applies computer blocking protection - this is done by the computer in the simulation when the track permit is approved. The Form D is addressed to the "TC Driver" and specifies its location (*To Driver TC1404 at CP-11*). Line 2 is given with direction, track, and limits of authority (*Operate in West Direction on No2 Trk Between CP-11 and CP-21*). Track cars may follow trains in a block and line 3 is given to indicate any trains that are ahead (*Trains or Track Cars Ahead Extra 8048 West or None*). When the track permit is reported clear, the Form D is fulfilled and marked with an "X".

Track Gangs (Foreman)

When a gang works on a track, it is taken out of service with a Form D. Just as with track cars, blocking is applied, then the form is issued. It is addressed to "Foreman" and specifies the work location (*To Foreman Jones at CP-22*). Line 4 is used to designate which track is out of service, the limits and the name of the foreman in charge (*No2 Trk Out of Service Between/At CP-22 and CP-23 In Charge of Frm Jones*). When the foreman reports clear at the end of the day, this type of Form D must be cancelled using the space provided.

Other Track Work (Foul Time)

Other types of work that do not involve on-track equipment or disturbing the track structure do not require a Form D. This type of work is listed as "Foul Time" in the simulation, and simply requires approval of the track permit. In real life, verbal permission is then given by radio or telephone.

Slow Orders

When trackwork is completed, or defects are discovered during inspections, temporary speed restrictions may be placed on a track. If a slow order remains in effect for more than one day, it is listed in the daily bulletin that is issued every night at 8:00 PM. Until they are listed in the bulletin, slow orders must be issued to trains operating over the affected track on Form D line 1 (*Line Boston Sub, Trk Single Between/At MP75 and MP76, Speed Frt 10, Speed Signs Displayed No*).

Highway Grade Crossings

When the warning devices at a highway grade crossing are not functioning properly, all trains operating over the crossing must be notified using Form D line 12 (*Protect Crossing QB 20.9 Bishop St*). Since TD3 does not simulate highway crossings, this procedure must be recreated manually. Before a session is started, randomly select a crossing from the following list, and pick a random time that it will be reported as malfunctioning. Usually there will be at least one crossing that will require protection during any given shift, although most reports are false alarms. During daylight and evening hours, it will take 30 minutes for a maintainer to arrive and make repairs. At night, plan on protecting the crossing for two hours until a maintainer is called out from home.

Boston Sub Crossings:

QB 20.9 Bishop St, QB 21.3 Concord St, QB 24.2 Main St, QB 24.4 Cherry St.

Framingham Sub Crossings:

QBF 1.0 Spring St, QBF 3.5 Chestnut St, QBF 5.6 Summit St, QBF 11.5 South St, QBF 17.2 Farm Rd.

Fitchburg Sub Crossings:

QBU 6.8 Willard St, QBU 12.1 Hill Rd, QBU 18.8 Linden St, QBU 22.8 Main St, QBU 31.6 Central St.

Other Operating Situations

Other situations that require the use of the Form D, such as signal failures and maintenance work, are outlined in the NORAC rulebook. These rules, and the corresponding sections of the Form D, may be used in the same manner as the grade crossing rules. With a rulebook and timetable, there are no limits to what can be recreated.

Final Note

On most passenger railroad lines in the northeast, commuter trains run during the day and the freight trains only come out at night. On the CSX Boston Subdivision, long freights and priority intermodal trains share the rails with rush hour commuter runs on a daily basis. The NA Dispatcher coordinates these movements, balancing passenger schedules, van site cutoff times and necessary trackwork in order to keep the railroad fluid. And just when it seems like there will be a break from mainline traffic, there are trains on five different manual block territory branch lines to handle. Working the NA desk requires the dispatcher to be familiar with schedules and running times, and to formulate a plan to keep the traffic moving. Quick decisions must be made in order to avoid delays caused by late or disabled trains. The NA desk is an excellent territory for a dispatcher to sharpen his or her skills on.

Movement Permit Form D

FORM _____

DELIVERED TO _____

FORM D No. _____

Date ____/____/____

TO _____

FORM D CANCELLED		
TIME	DATE	DSPR

1. TEMPORARY SPEED RESTRICTIONS

LINE	TRK(S)	BETWEEN/AT	SPEED		SPEED SIGNS	
			PSGR/FRT		DISPLAYED	
					YES	NO

2. OPERATE IN _____ DIRECTION(S) _____ TRK BETWEEN _____ AND _____

ON _____ TRK BETWEEN _____ AND _____ DSPR _____ TIME _____

ON _____ TRK BETWEEN _____ AND _____ DSPR _____ TIME _____

ON _____ TRK BETWEEN _____ AND _____ DSPR _____ TIME _____

3. TRAINS OR TRACK CARS AHEAD _____

TC PROCEED PAST STOP SIGNAL(S) AT _____

4. _____ TRK OUT OF SERVICE BETWEEN/AT _____

IN CHARGE OF _____

_____ TRK OUT OF SERVICE BETWEEN/AT _____

IN CHARGE OF _____

5. _____ LINE _____ TRK OBSTRUCTED FOR MAINTENANCE BETWEEN _____

AND _____

6. NON-SIGNALLED DCS RULES IN EFFECT ON _____ TRK(S) BETWEEN _____ AND _____

7. INT AND CP SIGNALS OUT OF SERVICE ON _____ TRK(S) AT _____

8. REMAIN AT _____ ON _____ TRK UNTIL ENGINE ARRIVES TO ASSIST

9. OPERATE AT RESTRICTED SPEED ON _____ TRK TO _____ WHERE TRAIN IS DISABLED

10. TBS IN SERVICE AT _____

11. CSS RULES OUT OF SERVICE ON _____ TRK(S) BETWEEN _____ AND _____

12. PROTECT CROSSING(S) _____

13. OTHER INSTRUCTION/INFORMATION _____

DISPATCHER _____

TIME EFFECTIVE _____ M